

24-Mar-23

10:59:44

1
1 ms
0.50 V

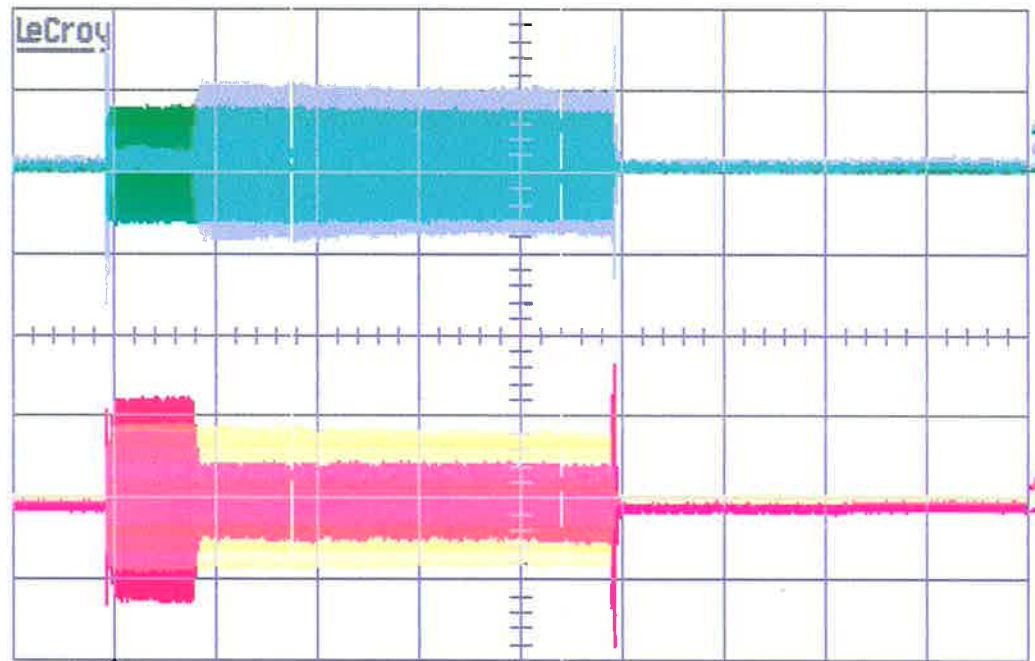
2
1 ms
100mV

3
1 ms
0.50 V

4
1 ms
100mV

1 ms

1 .5 V AC
2 .1 V AC
3 .5 V AC
4 .1 V AC



54 sweeps:

	average	low	high	sigma
rms(1)	182.6mV	97.4	232.3	58.9
rms(2)	35.7mV	4.3	59.5	26.8
rms(3)	223.9mV	127.8	278.5	65.5
rms(4)	35.1mV	29.3	69.5	9.3
ampl(3)	601mV	330	767	187



Ext DC 470mV 1MΩ

10 MS/s

☐ NORMAL

24-Mar-23
10:59:59

1
1 ms
0.50 V

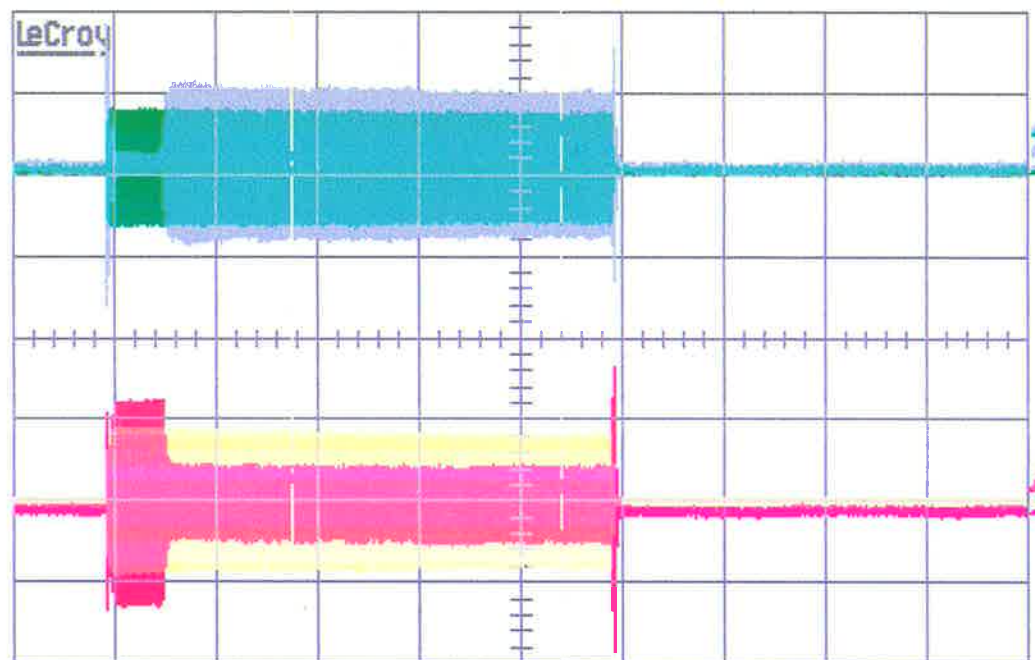
2
1 ms
100mV

3
1 ms
0.50 V

4
1 ms
100mV

1 ms

1 .5 V AC
2 .1 V AC
3 .5 V AC
4 .1 V AC



69 sweeps:

	average	low	high	sigma
rms(1)	193.6mV	97.4	233.8	56.1
rms(2)	40.9mV	4.3	59.8	25.6
rms(3)	235.9mV	127.8	280.1	62.3
rms(4)	33.9mV	29.3	69.5	8.5
ampl(3)	636mV	330	773	178



Ext DC 470mV 1MΩ

10 MS/s

☐ NORMAL

24-Mar-23
10:59:49

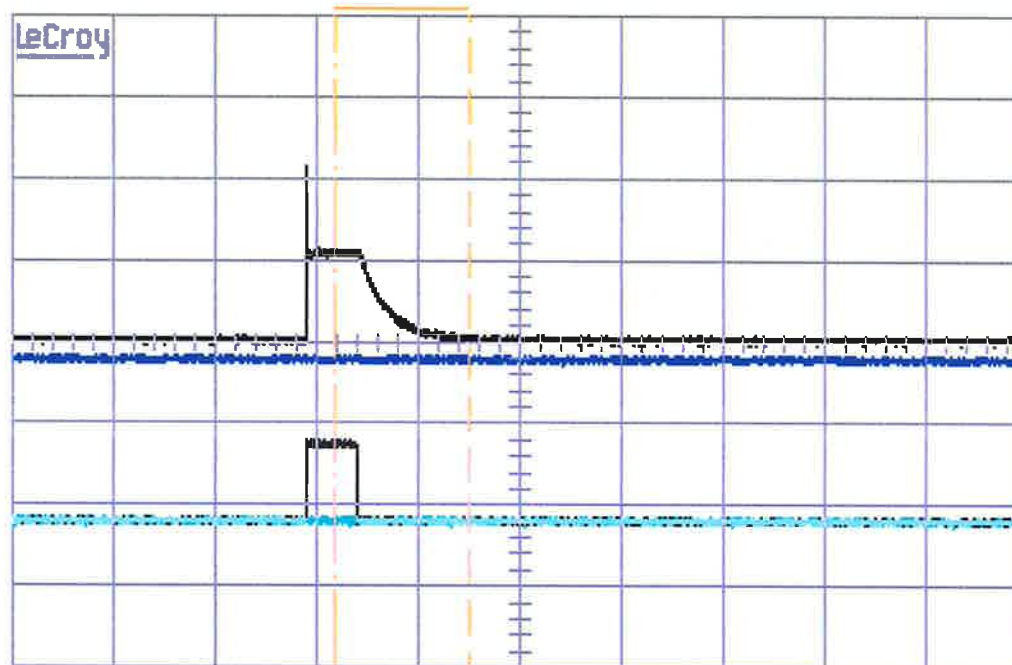
1
1 ms
50mV

3
1 ms
5.0 V

4
1 ms
200mV

2
1 ms
2.00 V

1 ms
1 50 mV DC
2 2 V DC
3 5 V DC
4 .2 V AC



13 sweeps:

	average	low	high	sigma
rms(1)	29.24mV	29.21	29.28	0.02
rms(2)	43mV	42	43	0
rms(3)	1.971 V	1.967	1.981	0.004
rms(4)	4.5mV	4.3	4.6	0.1
phase(1,3)	- - -	- - -	- - -	- - -



Ext10 DC 0.75 V 50Ω

TRIGGER SETUP

Edge SMART

trigger on
1 2 3 4 Ext
Ext10 Line

cplg Ext10
DC AC
LFREJ HFREJ

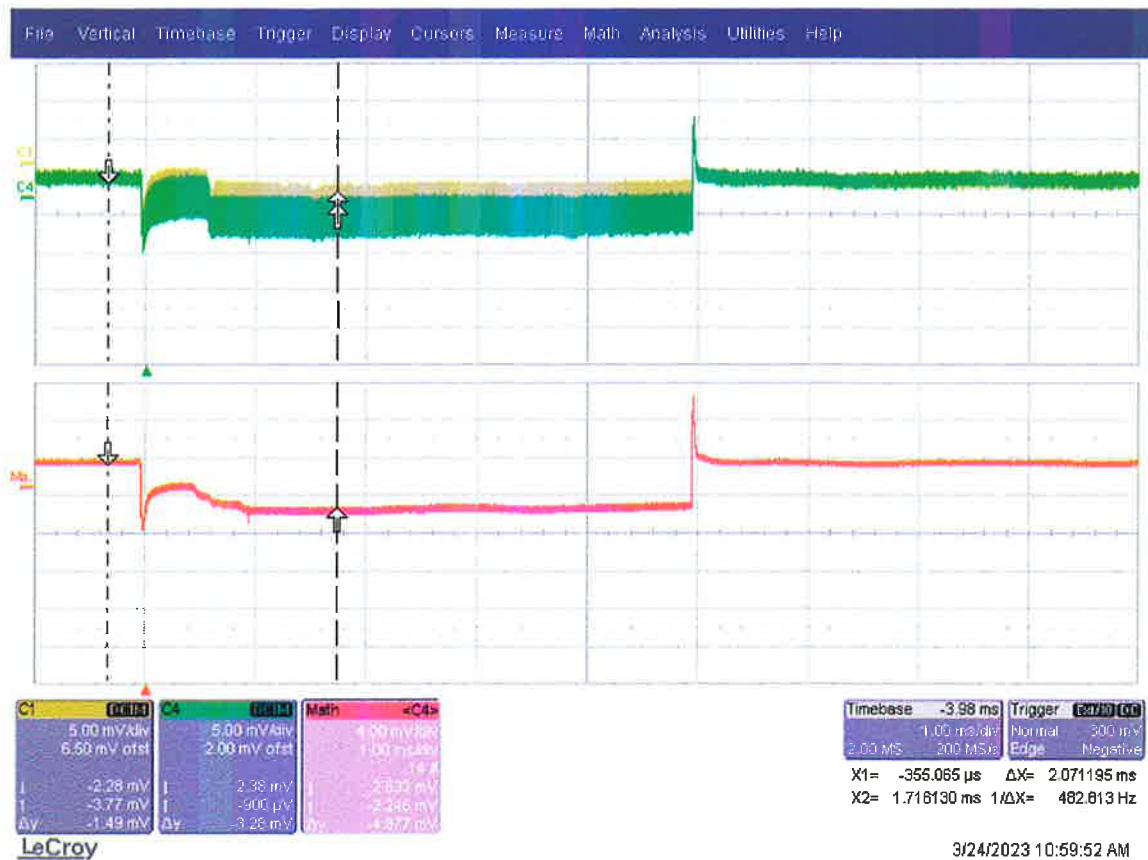
slope Ext10
Pos Neg
Window

External
Atten x1
DC50Ω DC1MΩ

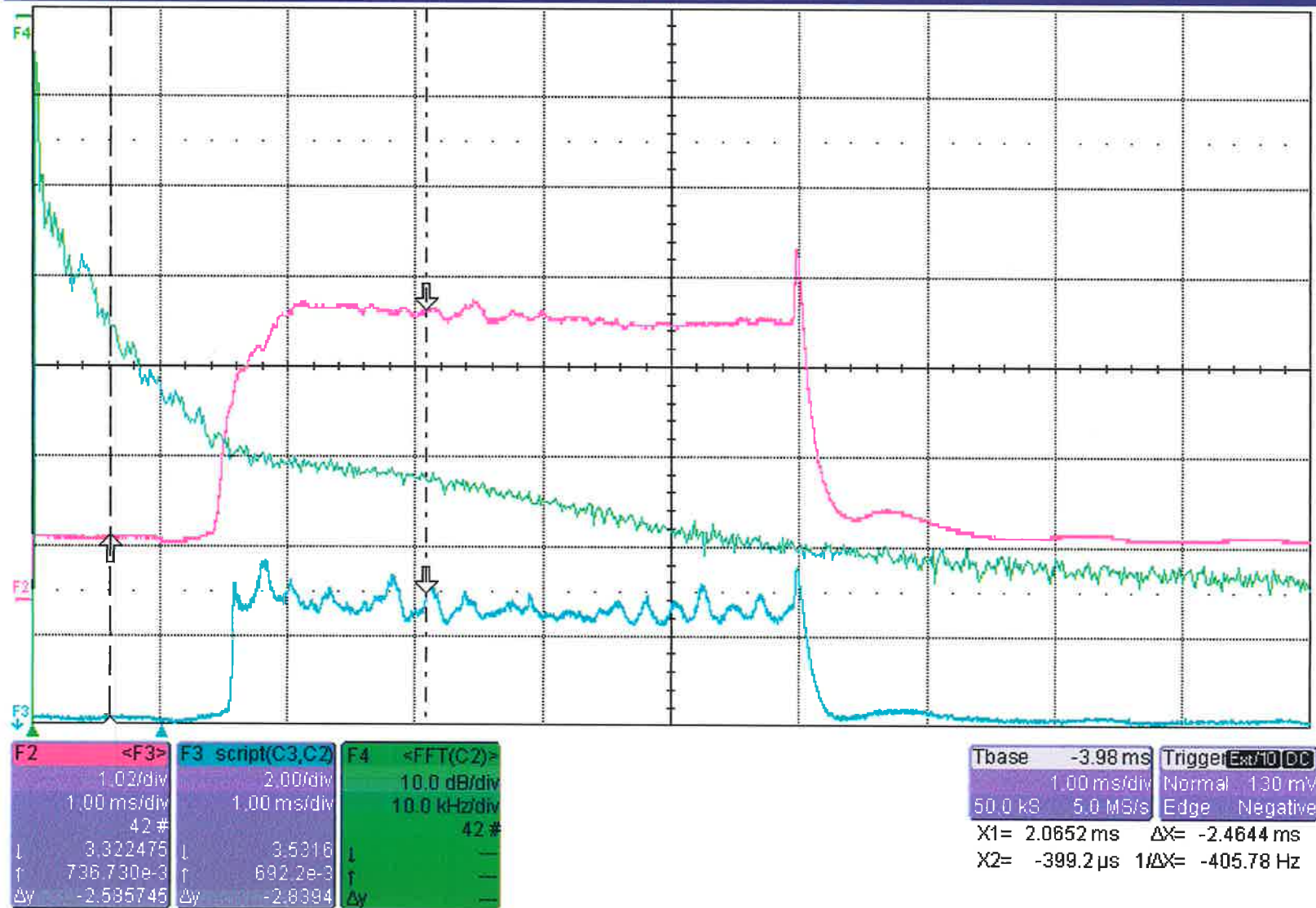
holdoff
- - -
OFF Time Evts

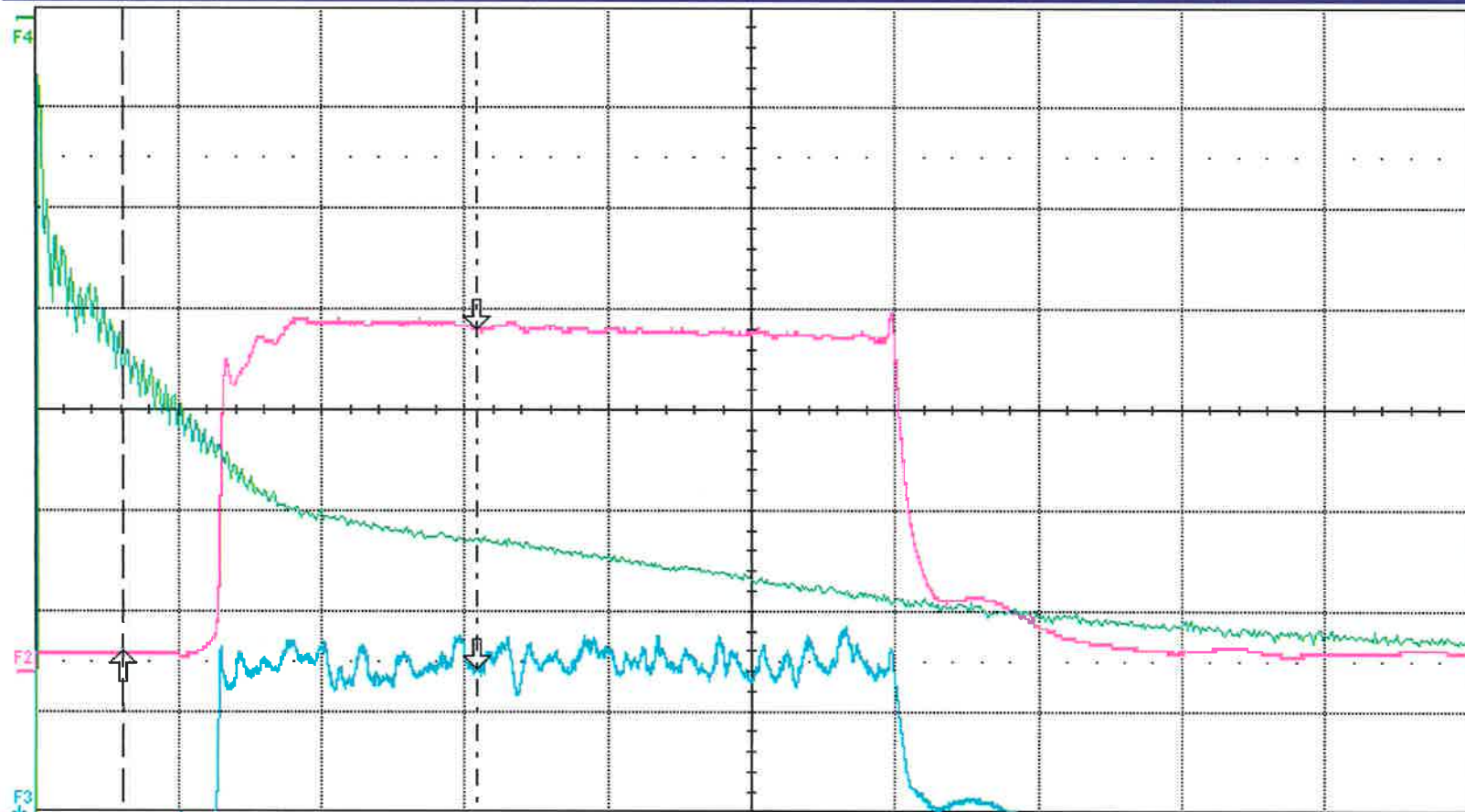
10 MS/s

☐ NORMAL



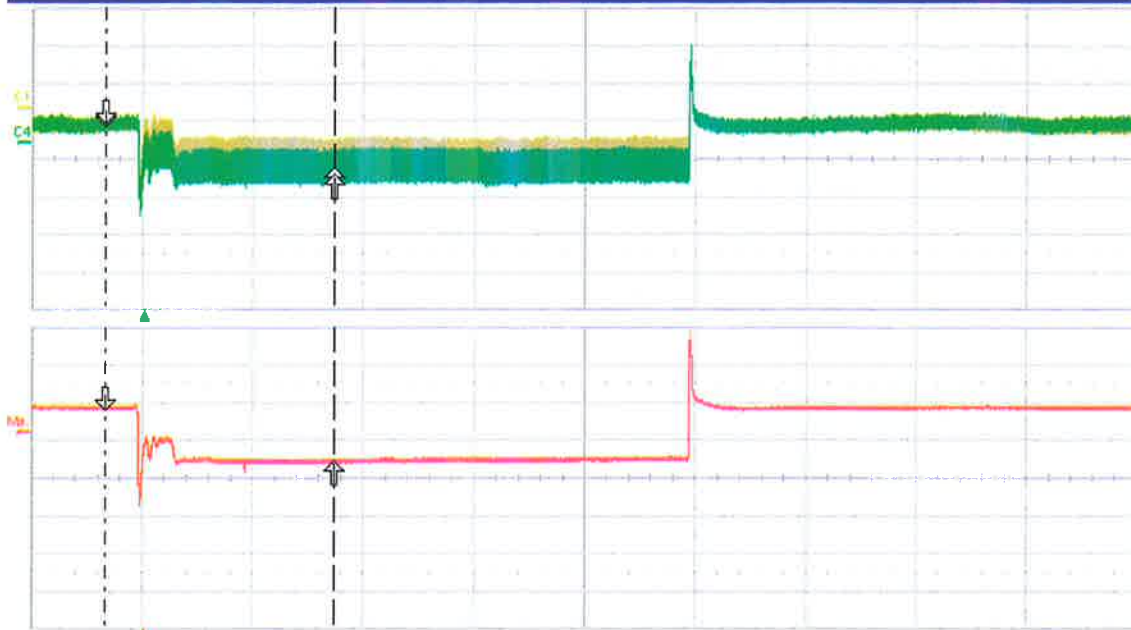
3/24/2023 10:59:52 AM





F2	<F3>	F3 script(C3,C2)	F4 <FFT(C2)>
1.02/div	2.00/div	10.0 dB/div	10.0 kHz/div
1.00 ms/div	1.00 ms/div	10.0 kHz/div	305 #
305 #			
↓ 3.499612	↓ 3.4292	↓ —	
↑ 211.069e-3	↑ 175.1e-3	↑ —	
Δy -3.298543	Δy -3.2541	Δy —	

Tbase	-3.98 ms	Trigger	Ext10 DC
	1.00 ms/div	Normal	130 mV
50.0 kS	5.0 MS/s	Edge	Negative
X1=	2.0852 ms	ΔX=	-2.4644 ms
X2=	-399.2 μs	1/ΔX=	-405.78 Hz



C1	C4	Math
5.00 mV/div	5.00 mV/div	5.00 mV/div
6.50 mV ofst	2.00 mV ofst	1.00 mV/div
		305 #
1 -2.02 mV	1 -2.95 mV	1 -2.95 mV
2 -7.81 mV	2 -4.23 mV	2 -3.074 mV
ΔV -5.80 mV	ΔV -7.19 mV	ΔV -5.654 mV

Timebase	-3.98 ms	Trigger	Edge
1.00 ms/div	Normal	300 mV	
2.00 MS	200 MS/s	Edge	Negative
X1=	-355.065 μs	ΔX=	2.071195 ms
X2=	1.718130 ms	1/ΔX=	482.613 Hz

LeCroy

3/24/2023 11:22:34 AM

24-Mar-23
11:22:37

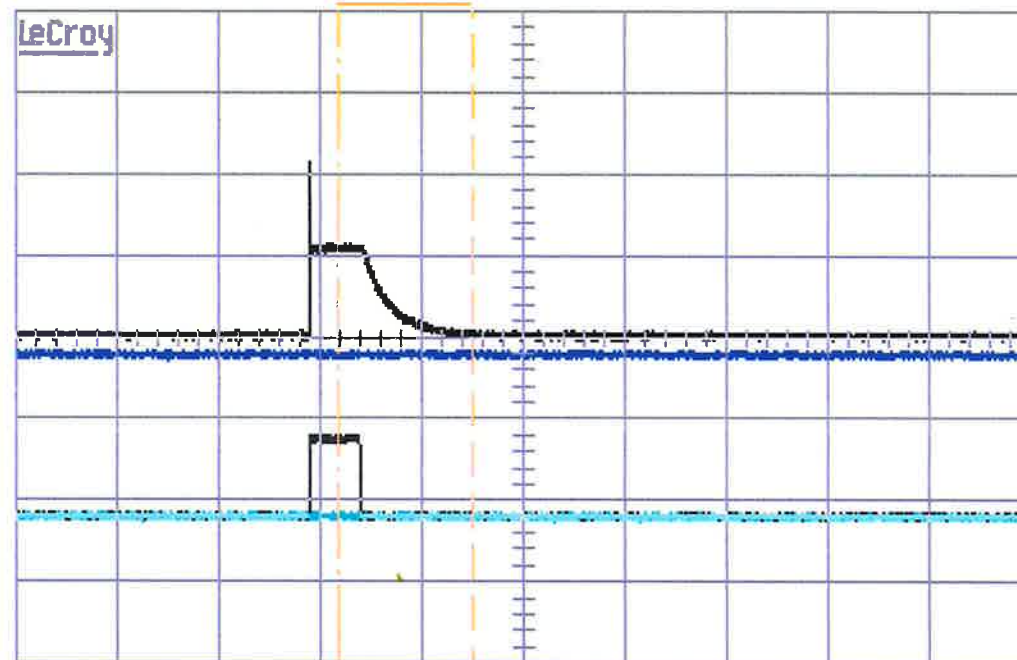
1
1 ms
50 mV

3
1 ms
5.0 V

4
1 ms
200 mV

2
1 ms
2.00 V

1 ms
1 50 mV DC
2 2 V DC
3 5 V DC
4 .2 V AC



305 sweeps: average low high sigma
rms(1) 29.31mV 29.22 29.41 0.04
rms(2) 43mV 42 44 0
rms(3) 1.969 V 1.961 1.982 0.004
rms(4) 4.4mV 4.2 4.5 0.0
phase(1,3) - - - - -



Ext10 DC 0.75 V 50Ω

TRIGGER SETUP

Edge SMART

trigger on
1 2 3 4 Ext
Ext10 Line

cplg Ext10
DC AC
LFREJ HFREJ

slope Ext10
Pos Neg
Window

External
Atten x1
DC50Ω DC1MΩ

holdoff
- - -
OFF Time Evts

10 MS/s

☐ NORMAL

24-Mar-23
11:22:53

1
1 ms
0.50 V

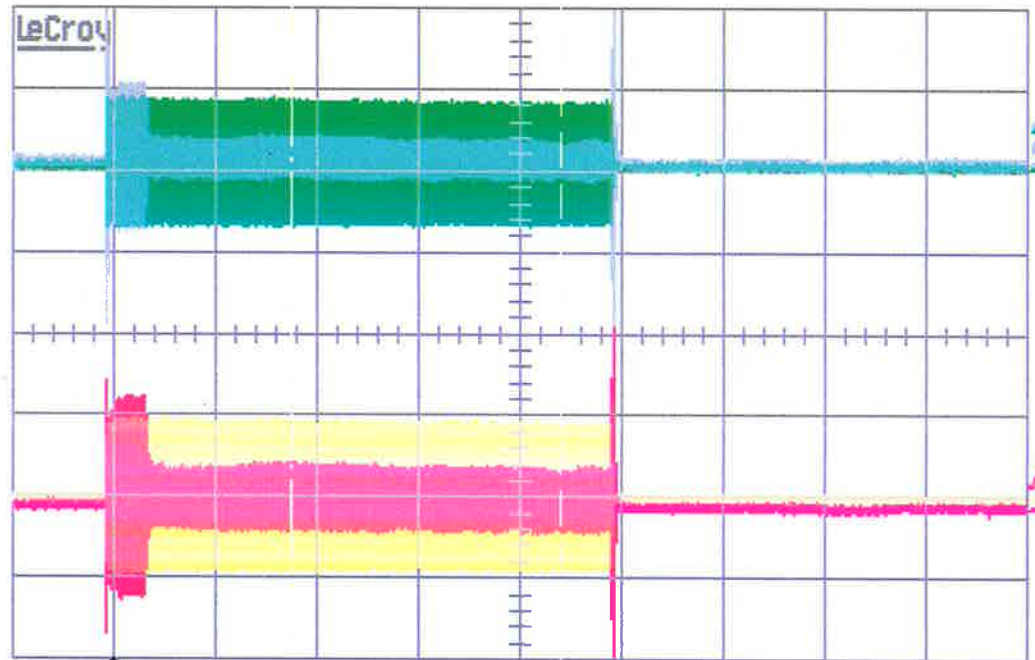
2
1 ms
100 mV

3
1 ms
0.50 V

4
1 ms
100 mV

1 ms

1 .5 V AC
2 .1 V AC
3 .5 V AC
4 .1 V AC



306 sweeps:

	average	low	high	sigma
rms(1)	255.5mV	250.2	261.0	2.6
rms(2)	14.1mV	13.5	14.9	0.2
rms(3)	300.4mV	294.8	306.2	2.8
rms(4)	24.9mV	24.4	26.1	0.3
ampl(3)	830mV	814	845	9



Ext DC 470mV 1M Ω

10 MS/s

☐ NORMAL

PFRC FEC RGA Analog Scan

Log every scan: 257/1000

Mar 24, 2023 11:22:43 AM

Analysis for pfrc-rga-fec

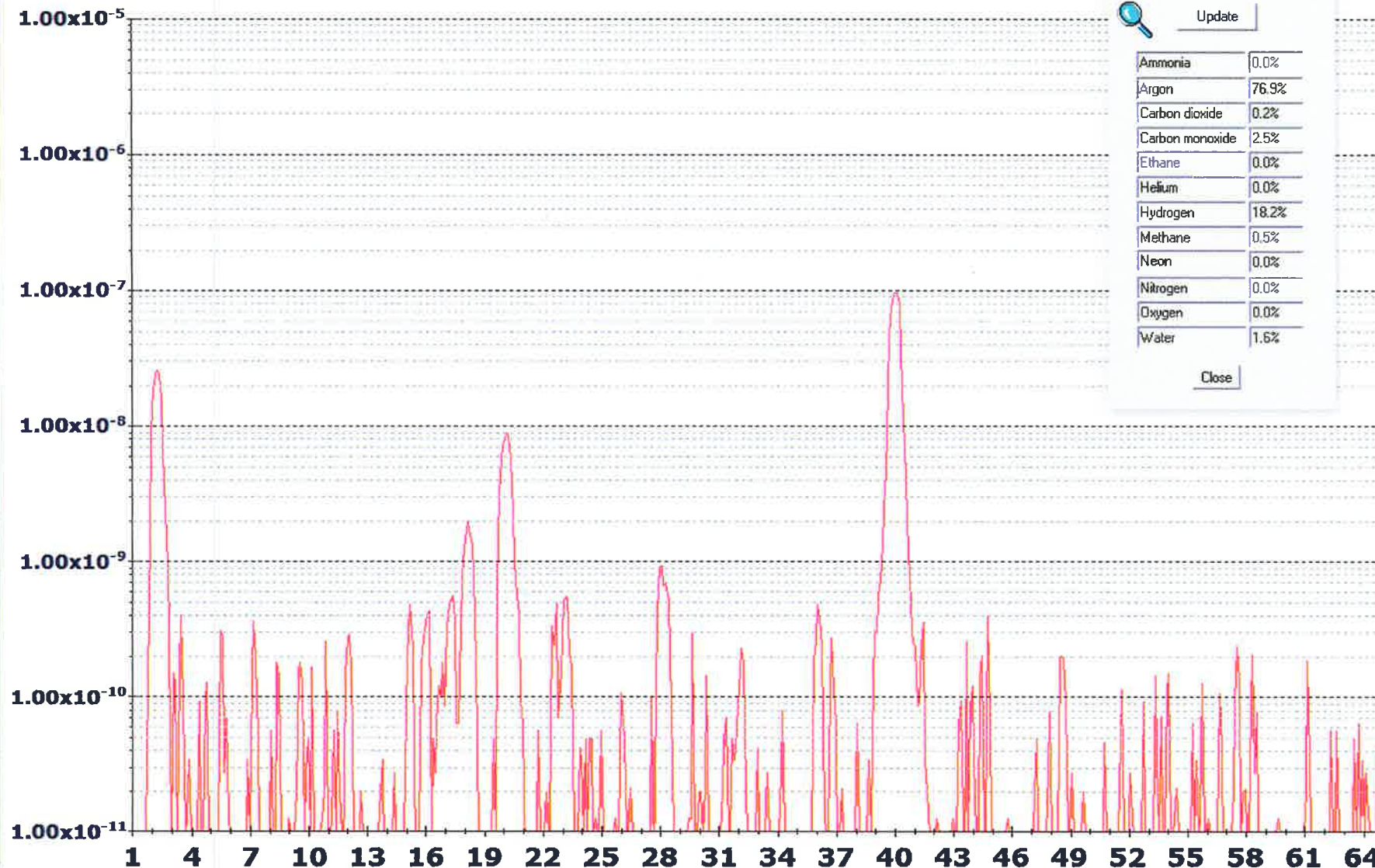


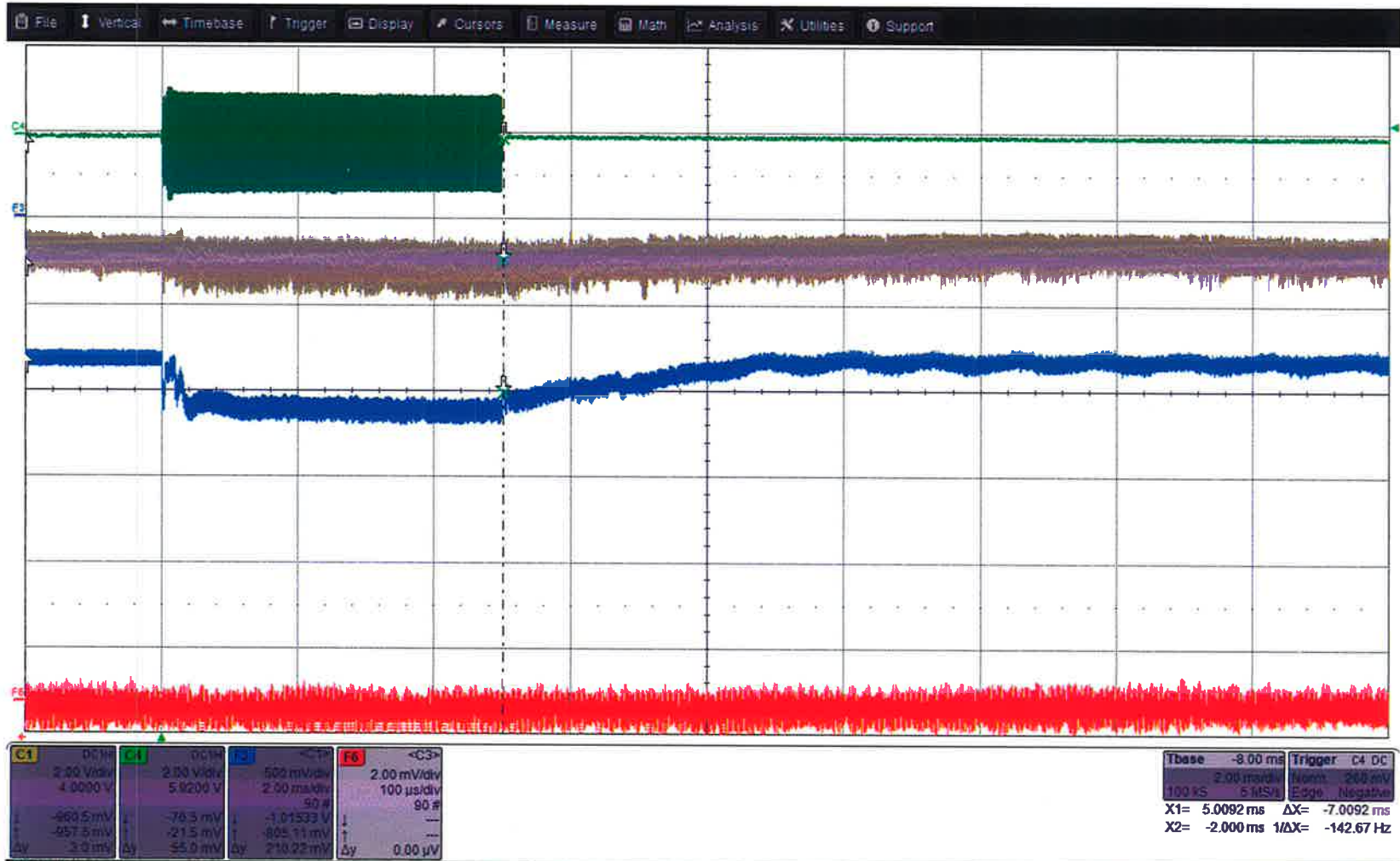
Update

Ammonia	0.0%
Argon	76.9%
Carbon dioxide	0.2%
Carbon monoxide	2.5%
Ethane	0.0%
Helium	0.0%
Hydrogen	18.2%
Methane	0.5%
Neon	0.0%
Nitrogen	0.0%
Oxygen	0.0%
Water	1.6%

Close

Torr





Print Now

3/24/2023 11:25:43 AM

24-Mar-23

11:36:20

1
1 ms
0.50 V

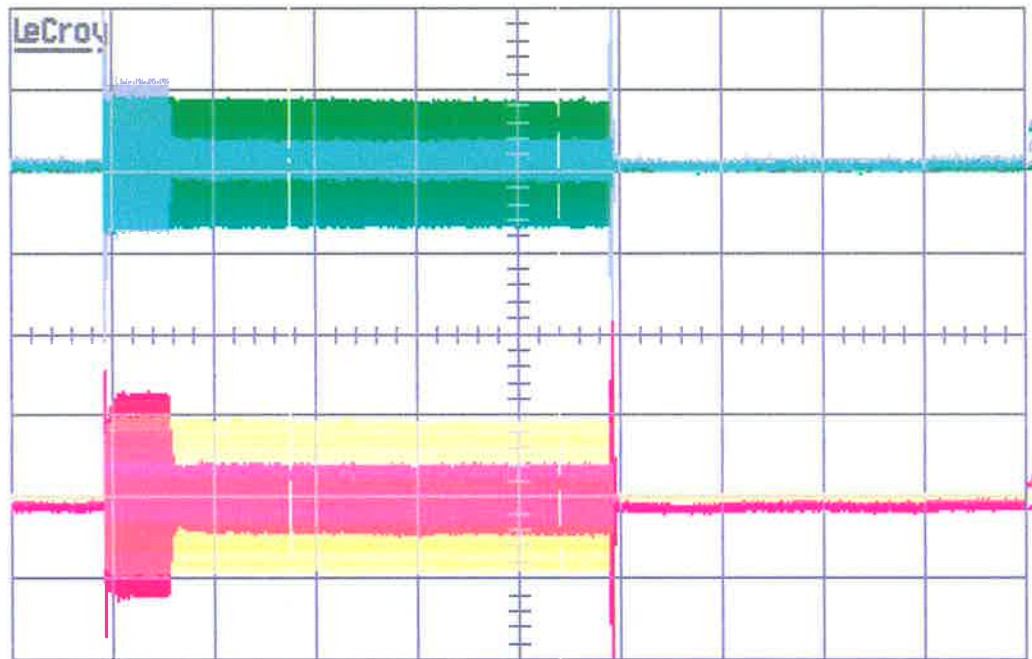
2
1 ms
100mV

3
1 ms
0.50 V

4
1 ms
100mV

1 ms

1 .5 V AC
2 .1 V AC
3 .5 V AC
4 .1 V AC



465 sweeps:

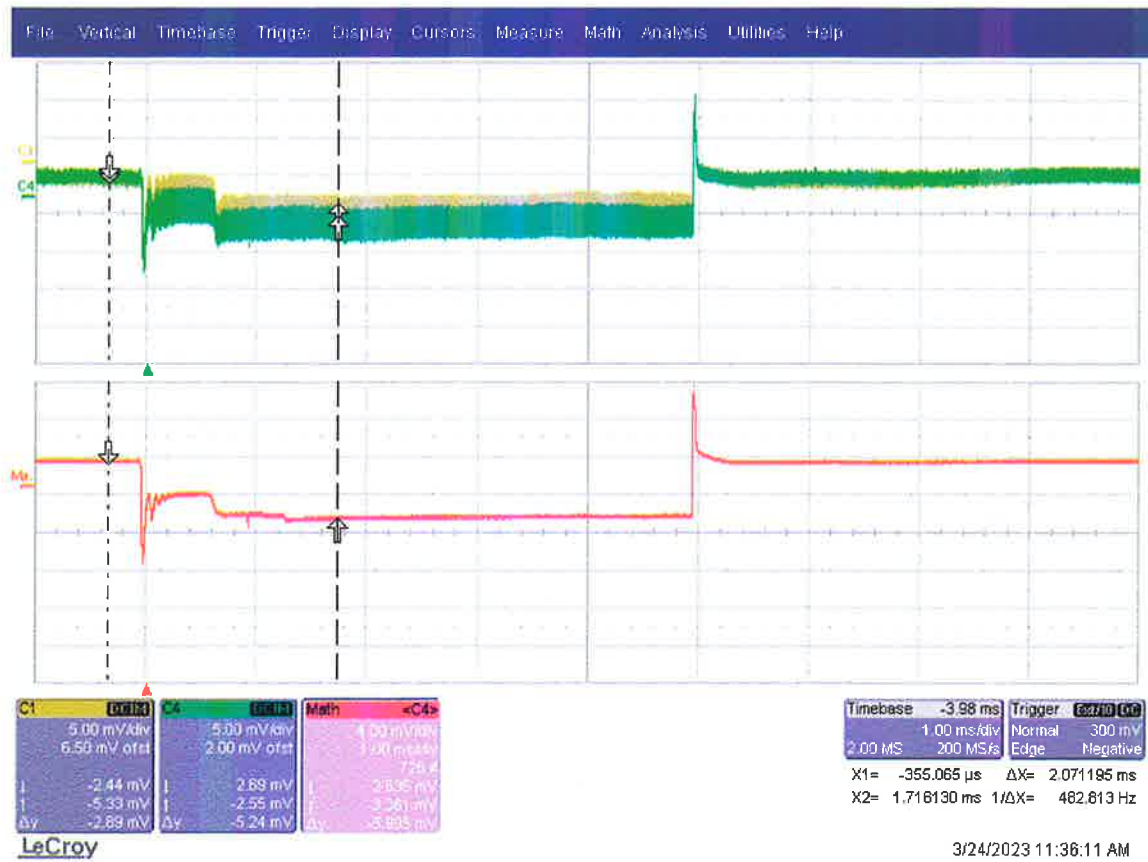
	average	low	high	sigma
rms(1)	262.7mV	255.2	266.9	2.7
rms(2)	14.5mV	13.0	58.6	4.9
rms(3)	307.2mV	299.4	317.0	3.0
rms(4)	27.2mV	25.3	80.8	5.9
ampl(3)	847mV	823	883	9



Ext DC 470mV 1M Ω

10 MS/s

☐ NORMAL



3/24/2023 11:36:11 AM

24-Mar-23
11:36:09

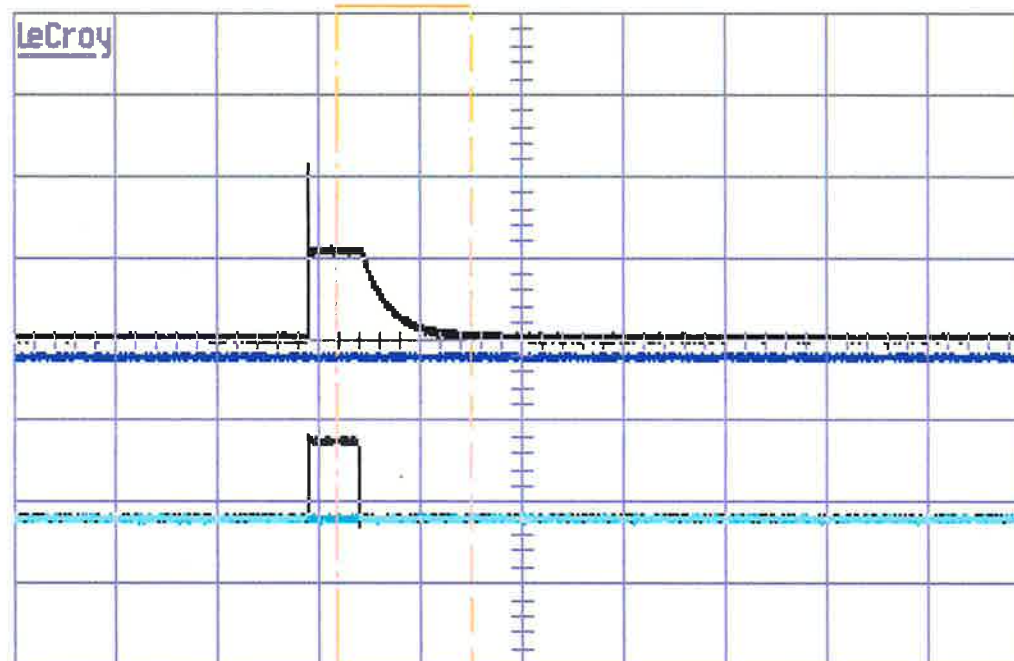
1
1 ms
50mV

3
1 ms
5.0 V

4
1 ms
200mV

2
1 ms
2.00 V

1 ms
1 50 mV DC
2 2 V DC
3 5 V DC
4 .2 V AC



721 sweeps:

	average	low	high	sigma
rms(1)	29.25mV	29.15	29.35	0.04
rms(2)	43mV	42	44	0
rms(3)	1.970 V	1.962	1.985	0.004
rms(4)	4.3mV	4.2	4.4	0.0
phase(1,3)	---	---	---	---



Ext10 DC 0.75 V 50Ω

TRIGGER SETUP

Edge SMART

trigger on
1 2 3 4 Ext
Ext10 Line

cplg Ext10
DC AC
LFREJ HFREJ

slope Ext10
Pos Neg
Window

External
Atten x1
DC50Ω DC1MΩ

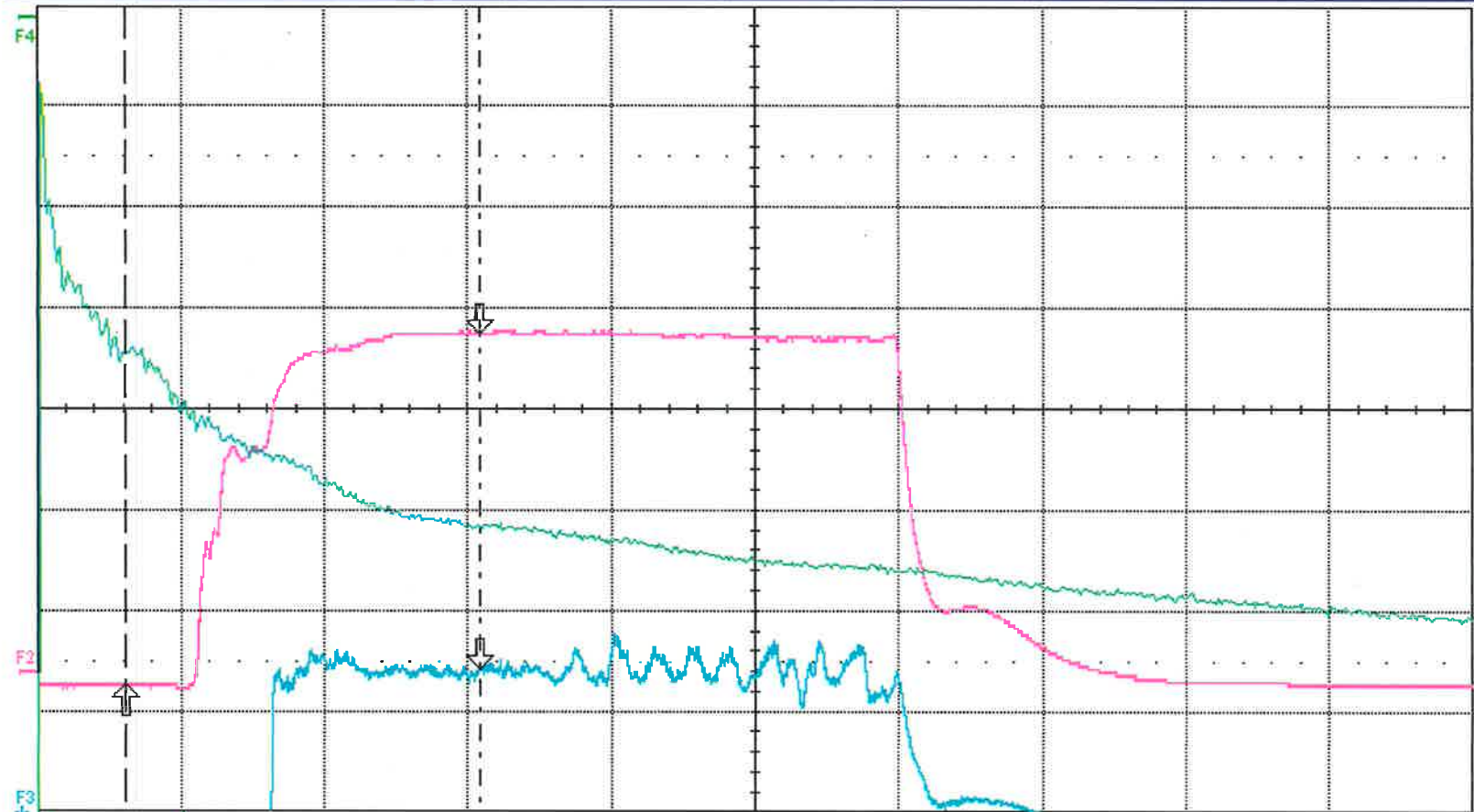
holdoff

OFF Time Evts

10 MS/s

☐ NORMAL

File Vertical Timebase Trigger Display Cursors Measure Math Analysis Utilities Help

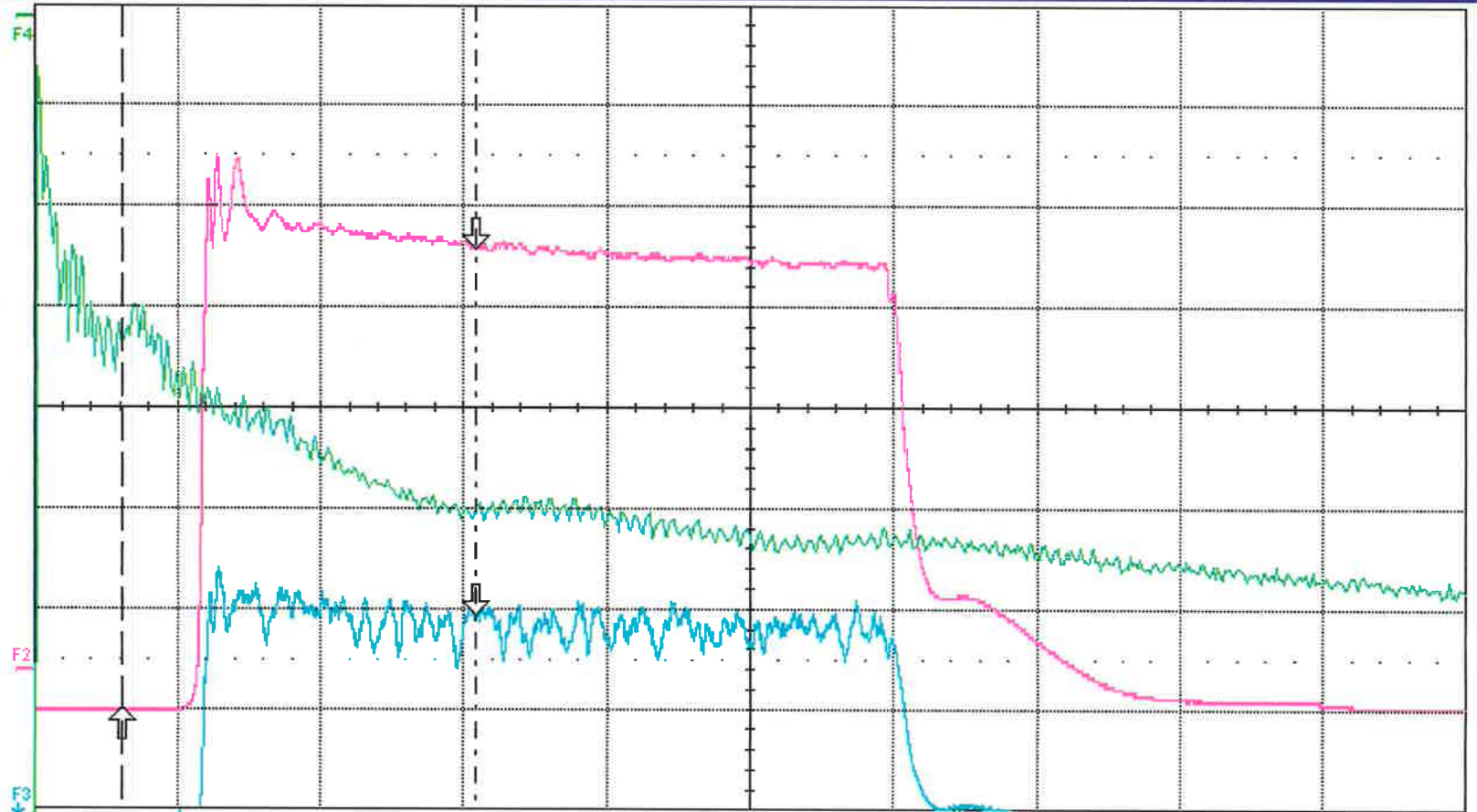


F2	<F3>	F3 script(C3,C2)	F4 <FFT(C2)>
1.02/div	2.00/div	10.0 dB/div	10.0 kHz/div
1.00 ms/div	1.00 ms/div	734 #	734 #
↓ 3.451302	↓ 3.4281	↓	↓
↑ -127.677e-3	↑ -304.7e-3	↑	↑
Δy -3.578979	Δy -3.7328	Δy	Δy

Tbase	-3.98 ms	Trigger Ext	10 DC
	1.00 ms/div	Normal	130 mV
50.0 kS	5.0 MS/s	Edge	Negative
X1=	2.0652 ms	ΔX=	-2.4644 ms
X2=	-399.2 μs	1/ΔX=	-405.78 Hz

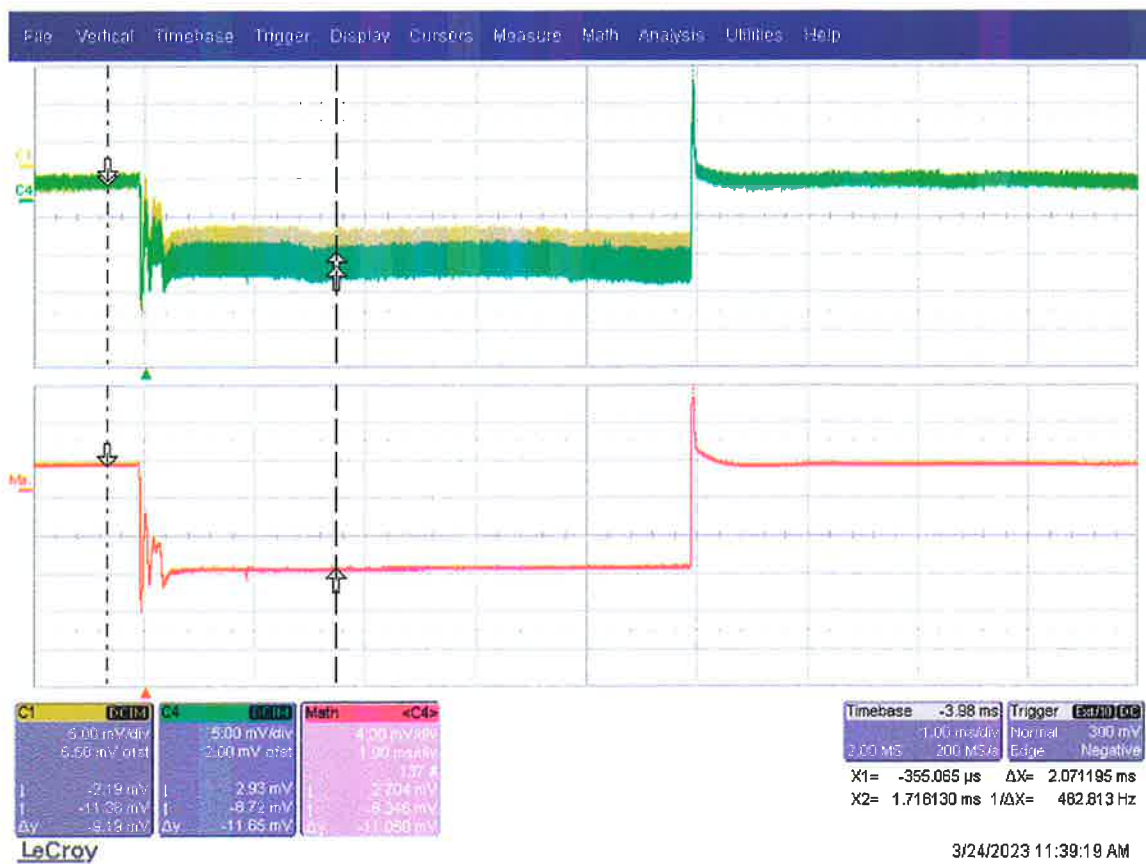
LeCroy

3/24/2023 11:36:21 AM



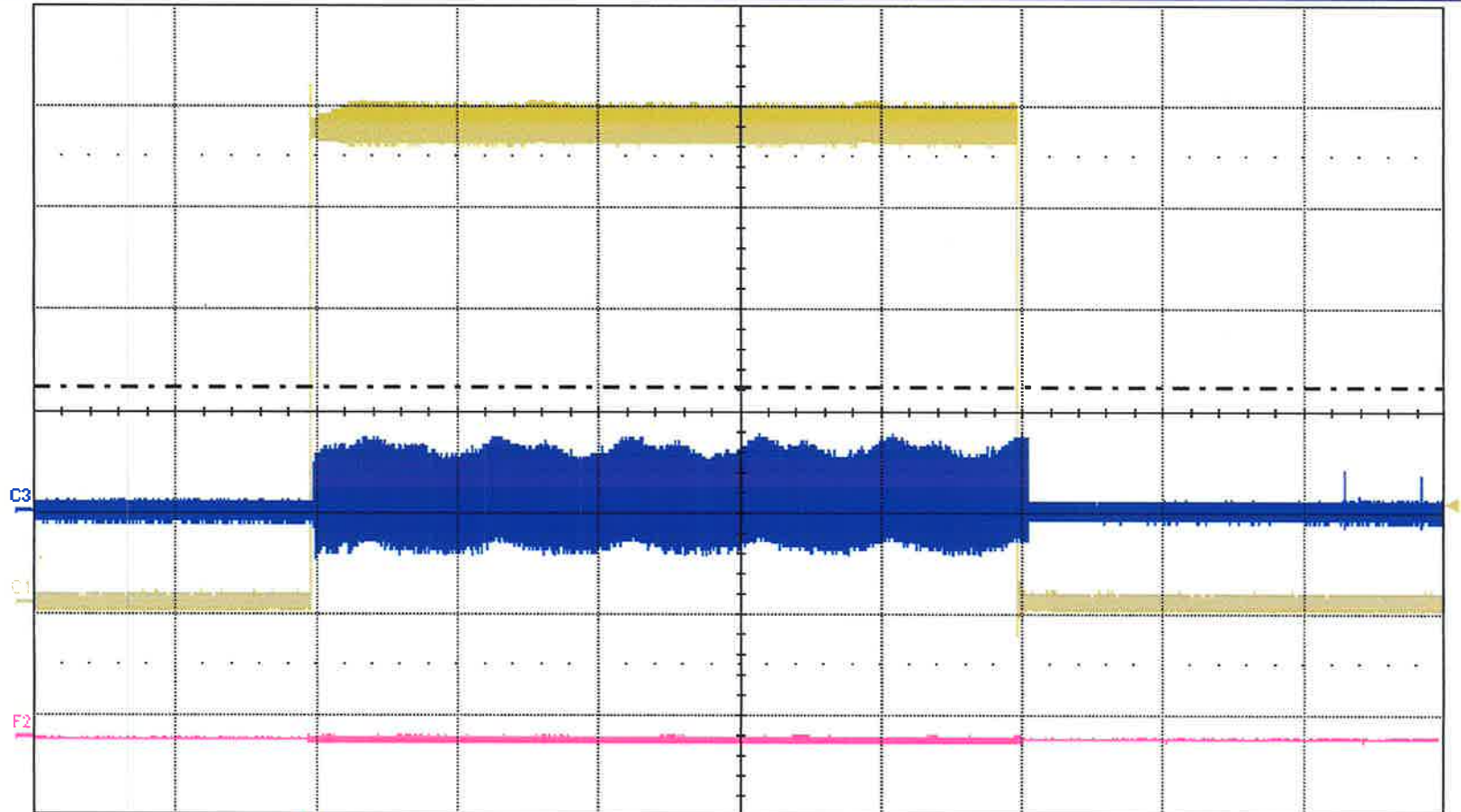
F2	<F3>	F3 script(C3,C2)	F4 <FFT(C2)>
1.02/div	2.00/div	10.0 dB/div	10.0 kHz/div
1.00 ms/div	1.00 ms/div	10.0 kHz/div	138 #
138 #			
↓ 4.297306	↓ 4.4485	↓	---
↑ -397.934e-3	↑ -462.3e-3	↑	---
Δy -4.695289	Δy -4.9108	Δy	---

Tbase	-3.98 ms	Trigger Ext/10 DC
	1.00 ms/div	Normal 130 mV
50.0 kS	5.0 MS/s	Edge Negative
X1= 2.0652 ms	ΔX= -2.4644 ms	
X2= -399.2 μs	1/ΔX= -405.78 Hz	



3/24/2023 11:39:19 AM

File Vertical Timebase Trigger Display Cursors Measure Math Analysis Utilities Help



C1	DC1M	C3	DC1M	F2	<C3>
1.00 V/div	200 mV/div	194 mV/div	1.00 ms/div	312 #	
-1.890 V ofst	-198.0 mV				
2.13 V	246 mV	672 mV			

Tbase	-3.04 ms	Trigger	C1 DC
1.00 ms/div	Normal	980 mV	
1.00 MS	100 MS/s	Edge	Positive

TELEDYNE LECROY

3/24/2023 11:39:19 AM

24-Mar-23
11:39:23

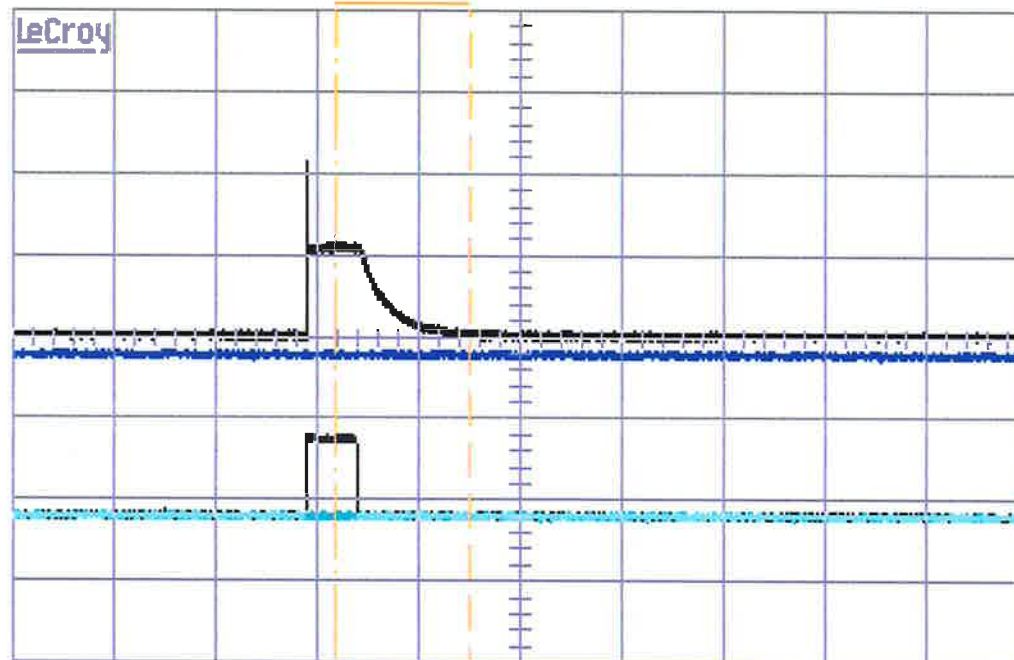
1
1 ms
50mV

3
1 ms
5.0 V

4
1 ms
200mV

2
1 ms
2.00 V

1 ms
1 50 mV DC
2 2 V DC
3 5 V DC
4 .2 V AC



137 sweeps:

	average	low	high	sigma
rms(1)	29.32mV	29.23	29.39	0.04
rms(2)	43mV	42	44	0
rms(3)	1.968 V	1.962	1.983	0.004
rms(4)	4.4mV	4.3	4.5	0.1
phase(1,3)	- - -	- - -	- - -	- - -



Ext10 DC 0.75 V 50Ω

TRIGGER SETUP

Edge SMART

trigger on
1 2 3 4 Ext
Ext10 Line

cplg Ext10
DC AC
LFREJ HFREJ

slope Ext10
Pos Neg
Window

External
Atten x1
DC50Ω DC1MΩ

holdoff
- - -
OFF Time Evts

10 MS/s

☐ NORMAL

24-Mar-23

11:39:38

1
1 ms
0.50 V

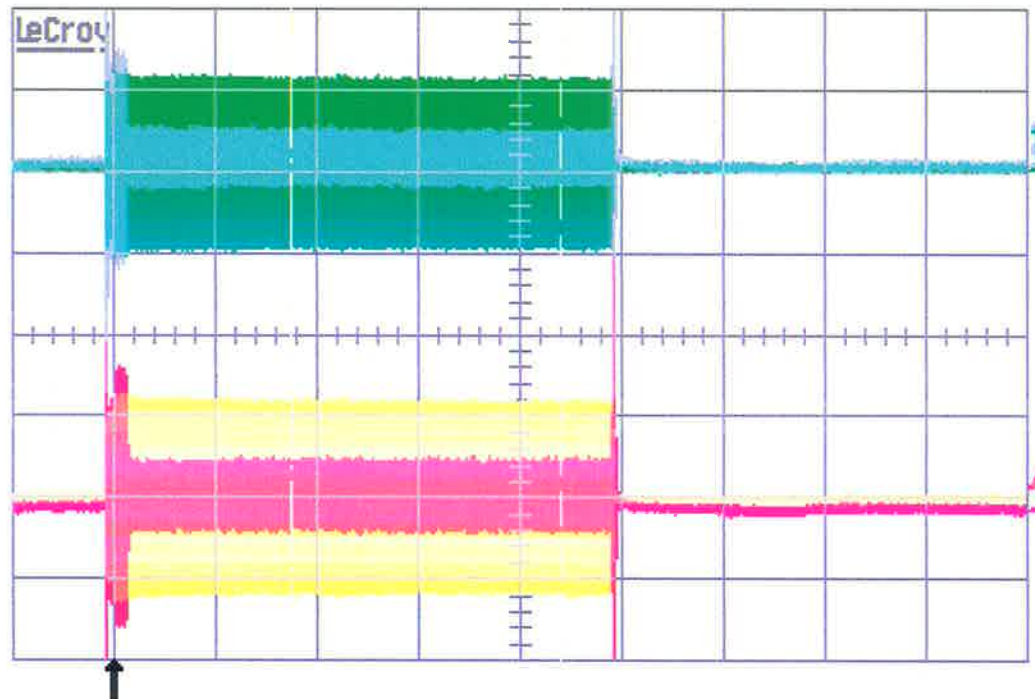
2
1 ms
100mV

3
1 ms
0.50 V

4
1 ms
100mV

1 ms

1 .5 V AC
2 .1 V AC
3 .5 V AC
4 .1 V AC



46 sweeps:

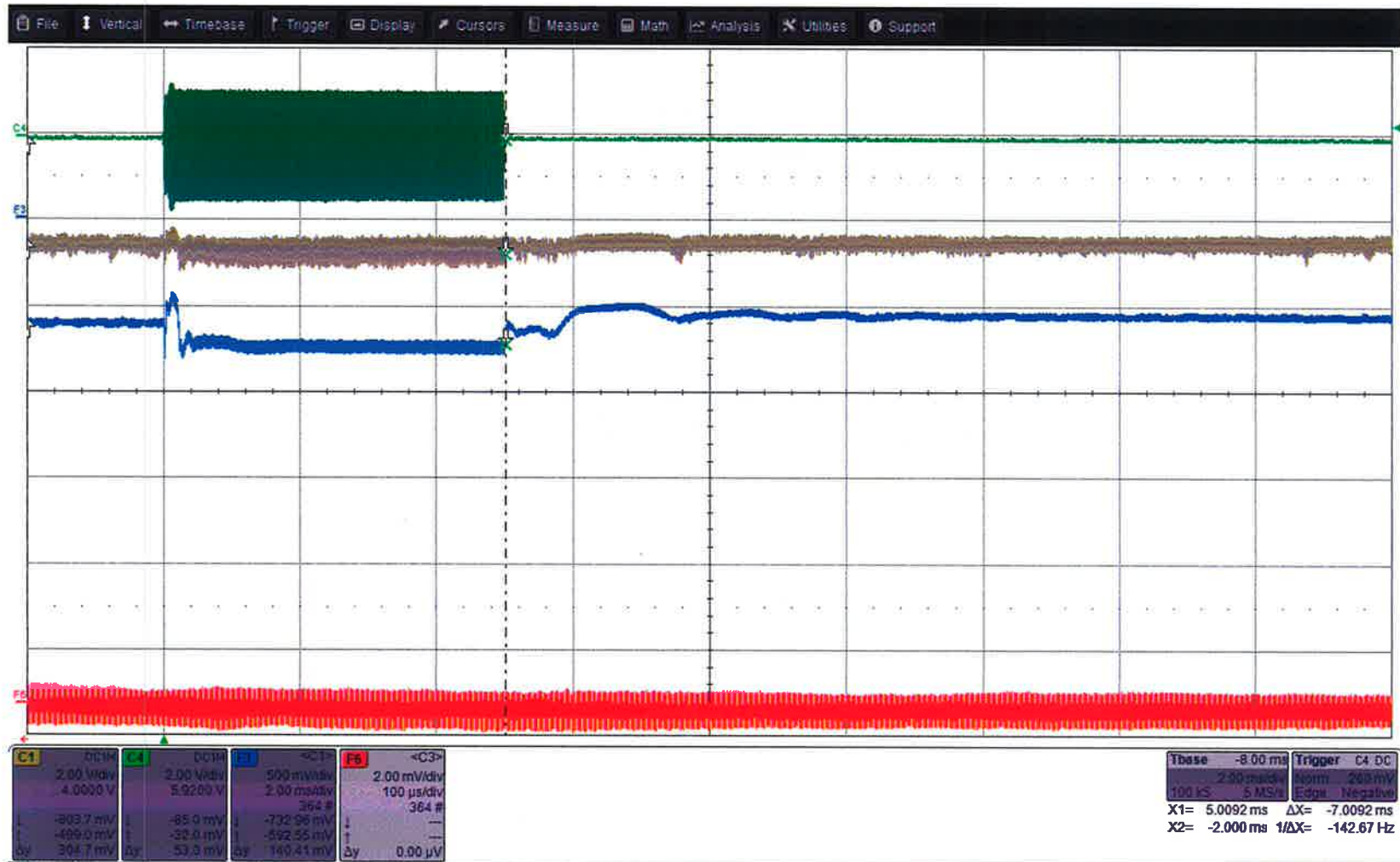
	average	low	high	sigma
rms(1)	364.9mV	360.5	368.3	2.7
rms(2)	21.6mV	21.3	22.0	0.2
rms(3)	406.6mV	402.5	409.8	2.5
rms(4)	31.3mV	30.8	31.8	0.3
ampl(3)	1.141 V	1.120	1.150	0.009



Ext DC 470mV 1MΩ

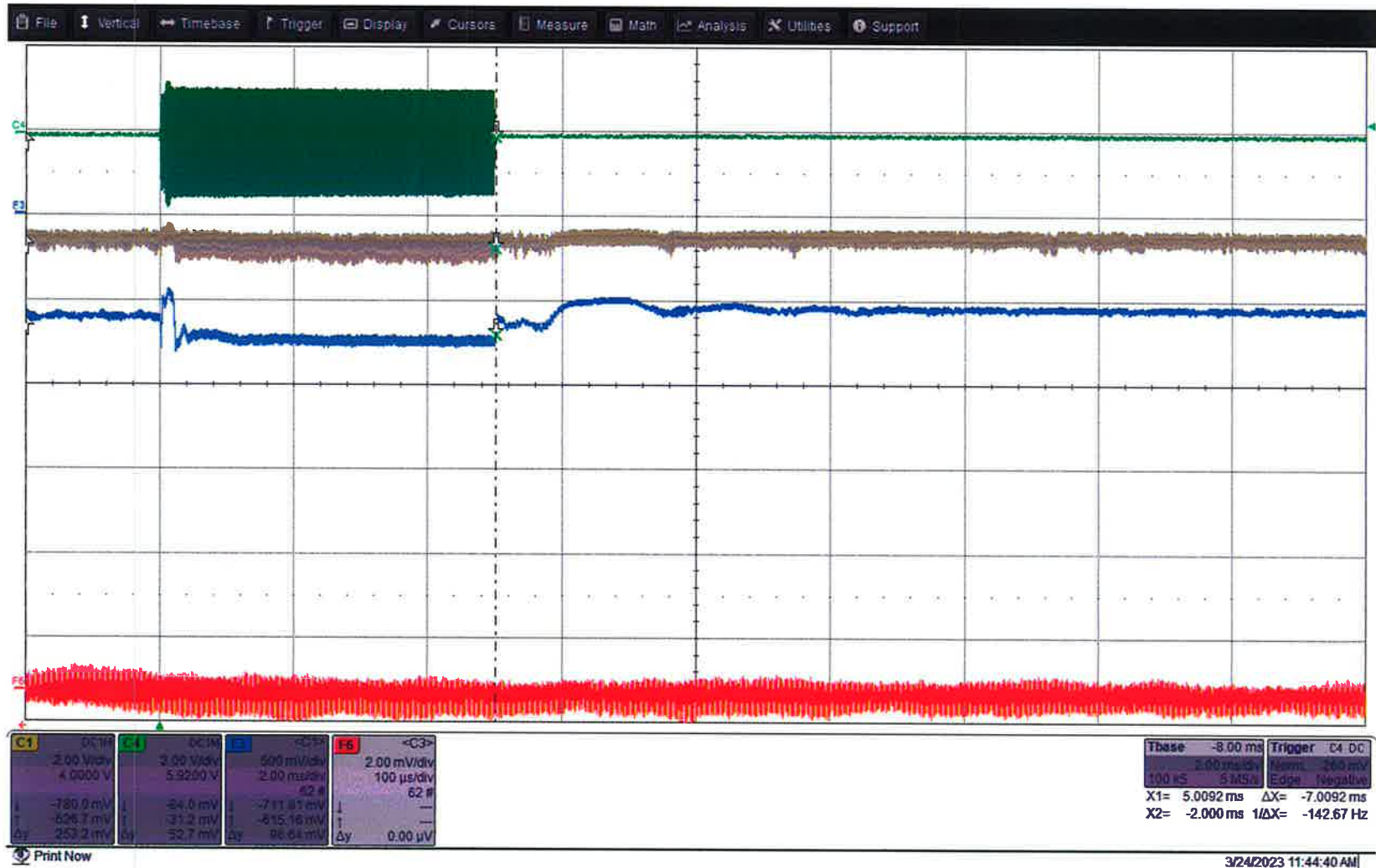
10 MS/s

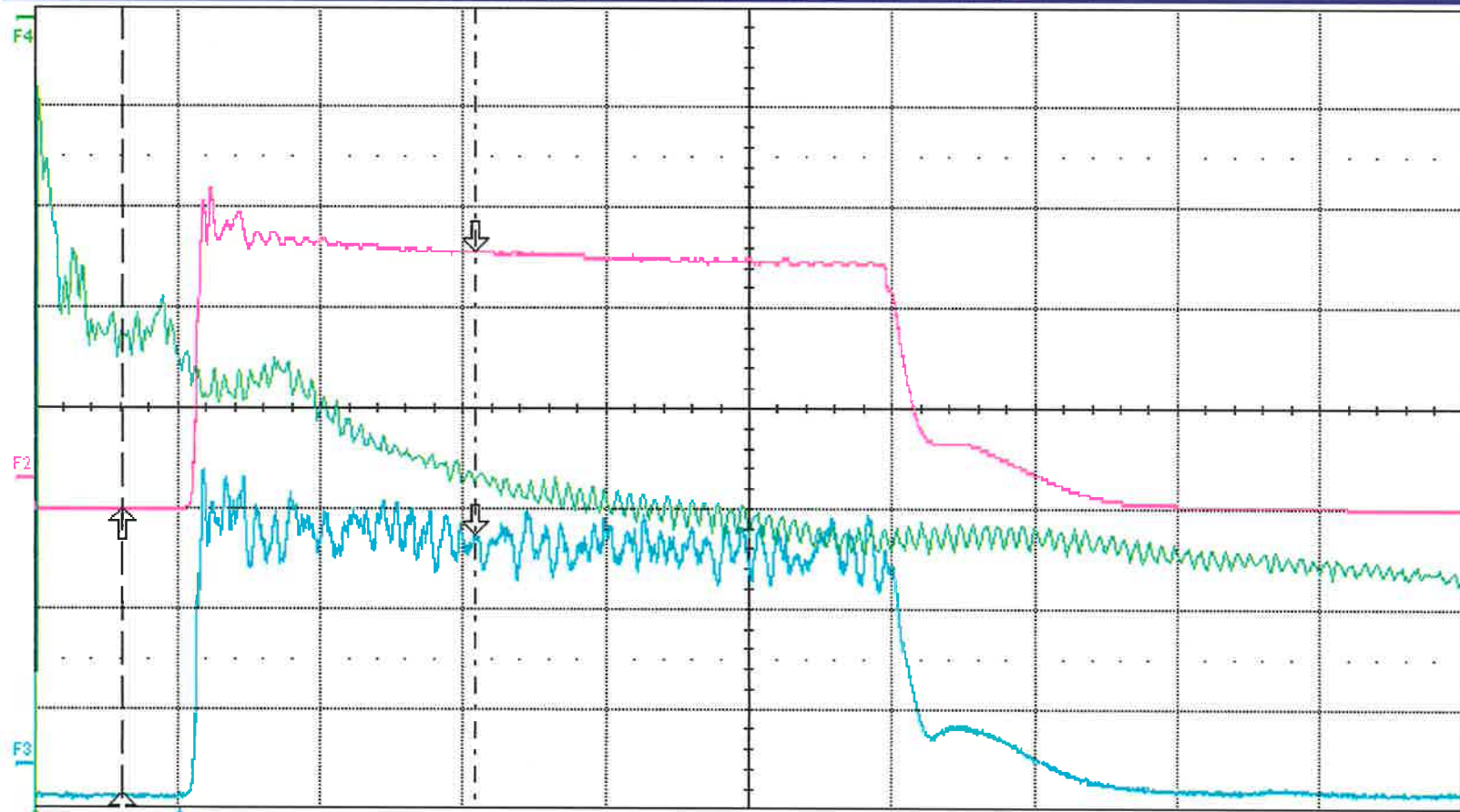
☐ NORMAL



Print Now

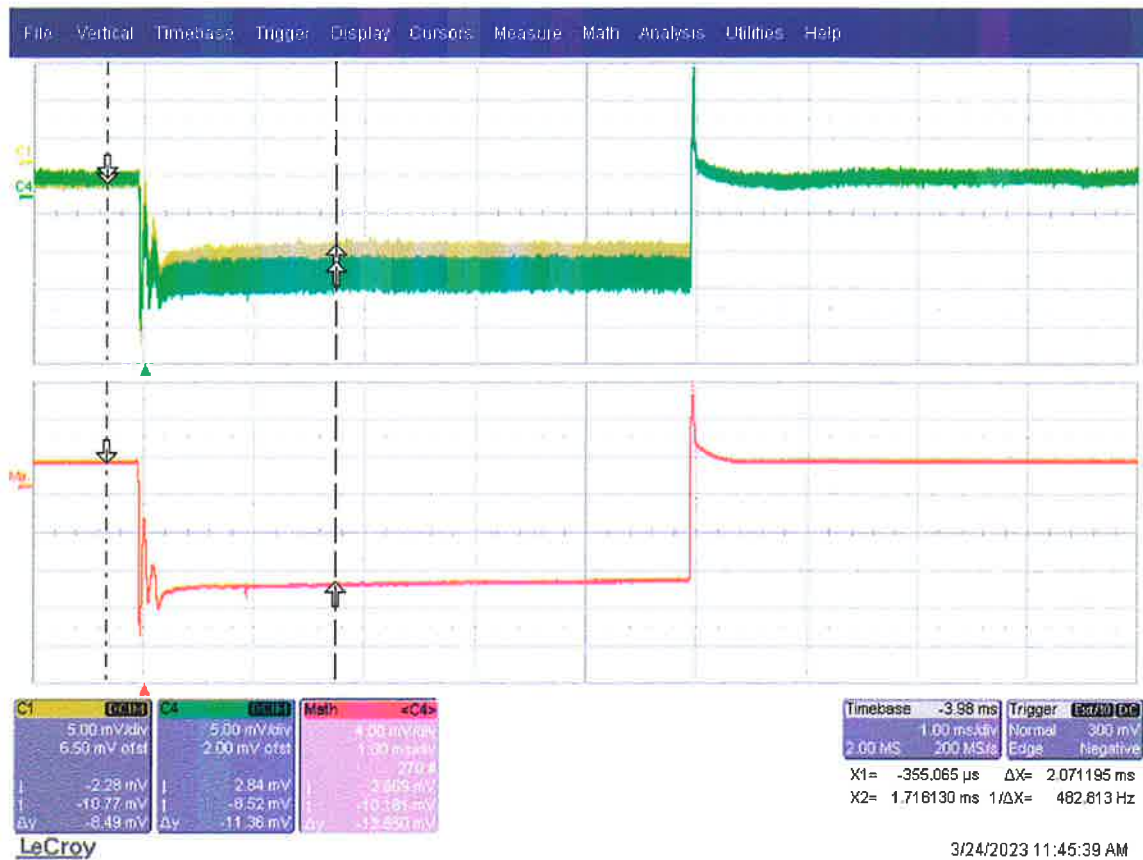
3/24/2023 11:43:35 AM





F2	<F3>	F3 script(C3,C2)	F4 <FFT(C2)>
2.00/div	2.00/div	2.00/div	10.0 dB/div
1.00 ms/div	1.00 ms/div	1.00 ms/div	10.0 kHz/div
257 #			265 #
L 4.577390	L 4.6090	L 4.6090	L ---
H -601.577e-3	H -619.3e-3	H -619.3e-3	H ---
Δy -5.178966	Δy -5.2284	Δy -5.2284	Δy ---

Tbase	-3.98 ms	Trigger	Ext10 DC
	1.00 ms/div	Normal	130 mV
50.0 kS	5.0 MS/s	Edge	Negative
X1=	2.0652 ms	ΔX=	-2.4644 ms
X2=	-399.2 μs	1/ΔX=	-405.78 Hz



3/24/2023 11:45:39 AM

24-Mar-23
11:45:41

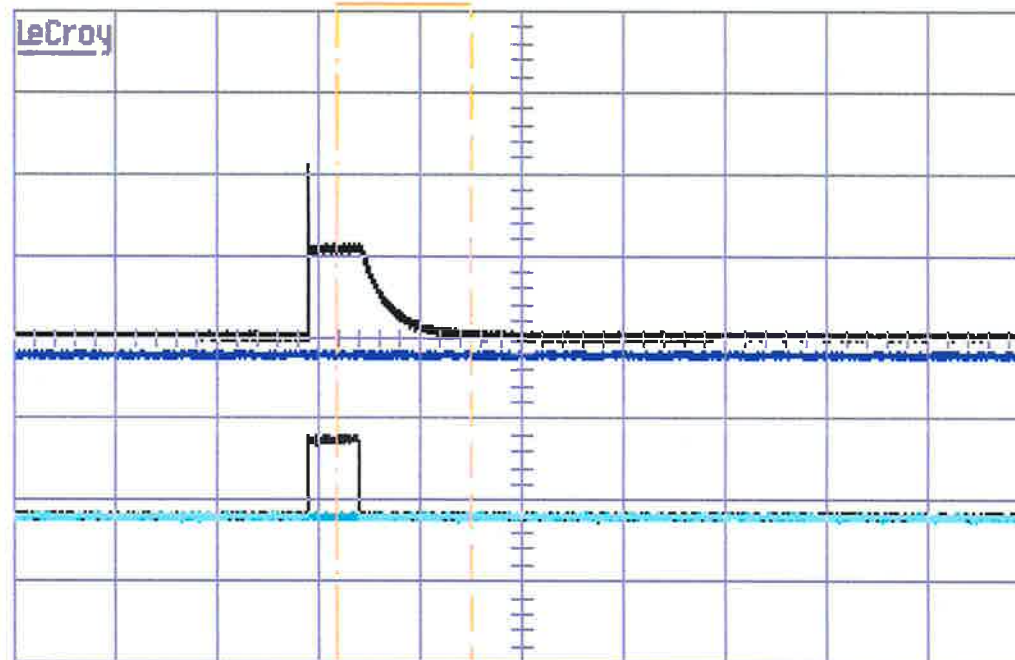
1
1 ms
50 mV

3
1 ms
5.0 V

4
1 ms
200 mV

2
1 ms
2.00 V

1 ms
1 50 mV DC
2 2 V DC
3 5 V DC
4 .2 V AC



273 sweeps:

	average	low	high	sigma
rms(1)	29.24mV	29.16	29.33	0.04
rms(2)	43mV	42	44	0
rms(3)	1.969 V	1.962	1.983	0.004
rms(4)	4.3mV	4.2	4.4	0.0
phase(1,3)	- - -	- - -	- - -	- - -



Ext10 DC 0.75 V 50Ω

TRIGGER SETUP

Edge SMART

trigger on
1 2 3 4 Ext
Ext10 Line

cplg Ext10
DC AC
LFREJ HFREJ

slope Ext10
Pos Neg
Window

External
Atten x1
DC50Ω DC1MΩ

holdoff
- - -
OFF Time Evts

10 MS/s

☐ NORMAL

24-Mar-23
11:45:57

1
1 ms
0.50 V

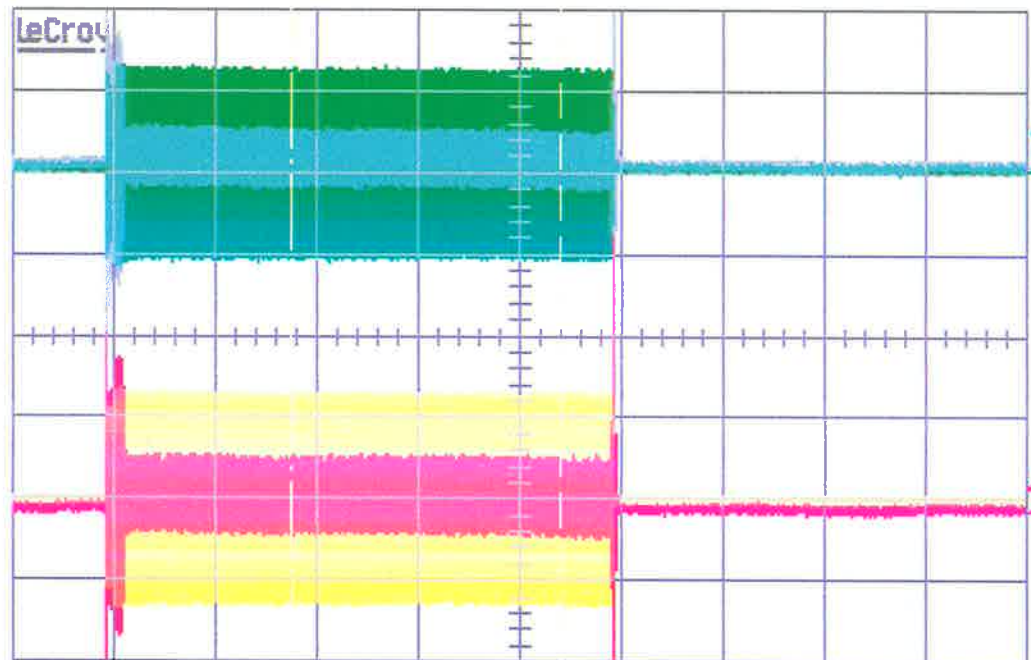
2
1 ms
100mV

3
1 ms
0.50 V

4
1 ms
100mV

1 ms

1 .5 V AC
2 .1 V AC
3 .5 V AC
4 .1 V AC



282 sweeps:

	average	low	high	sigma
rms(1)	401.5mV	397.7	404.5	1.9
rms(2)	23.2mV	22.4	24.2	0.5
rms(3)	439.9mV	436.1	442.3	1.9
rms(4)	34.0mV	33.4	34.7	0.3
ampl(3)	1.225 V	1.208	1.244	0.010

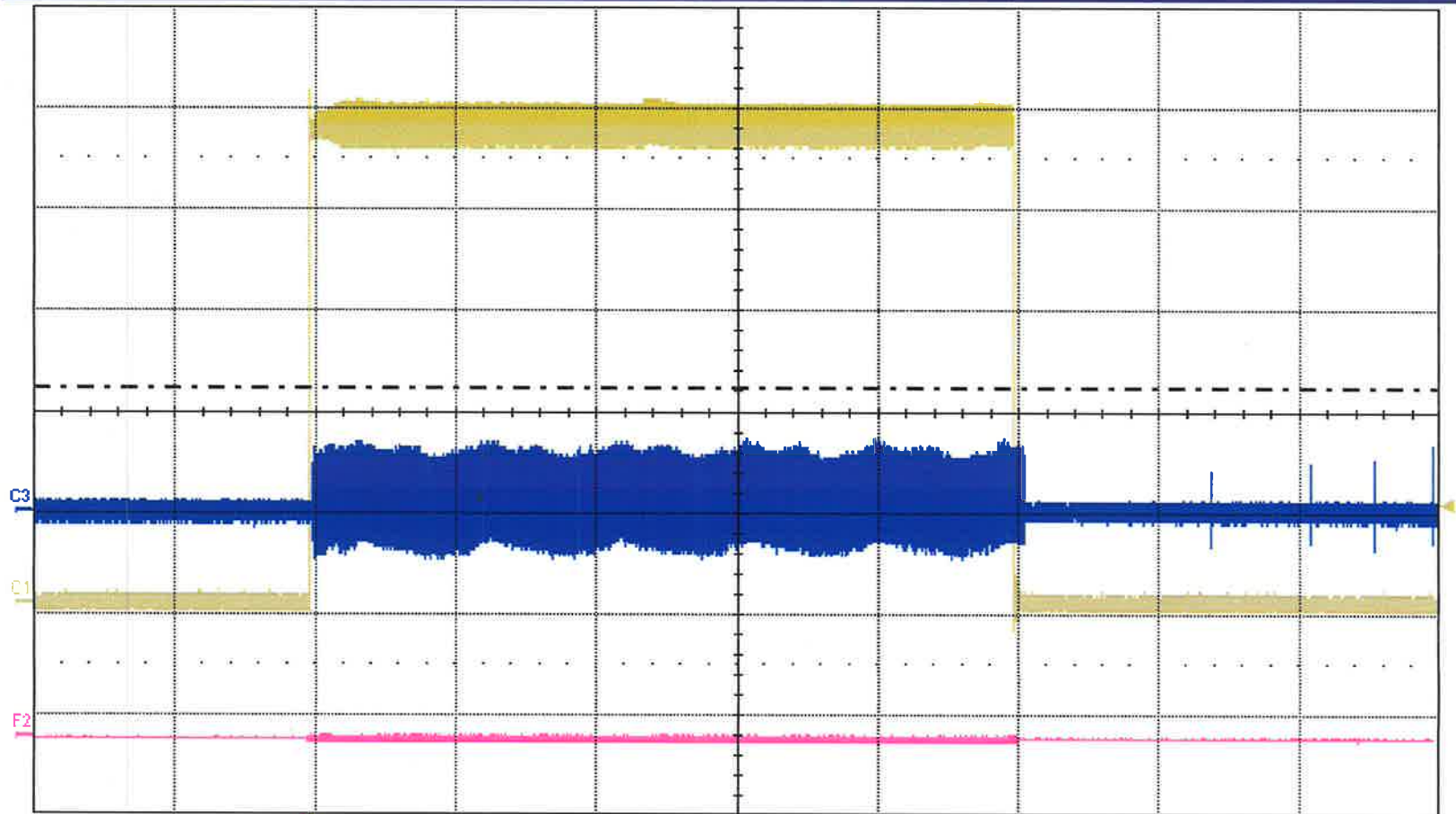


Ext DC 470mV 1MΩ

10 MS/s

☐ NORMAL

File Vertical Timebase Trigger Display Cursors Measure Math Analysis Utilities Help

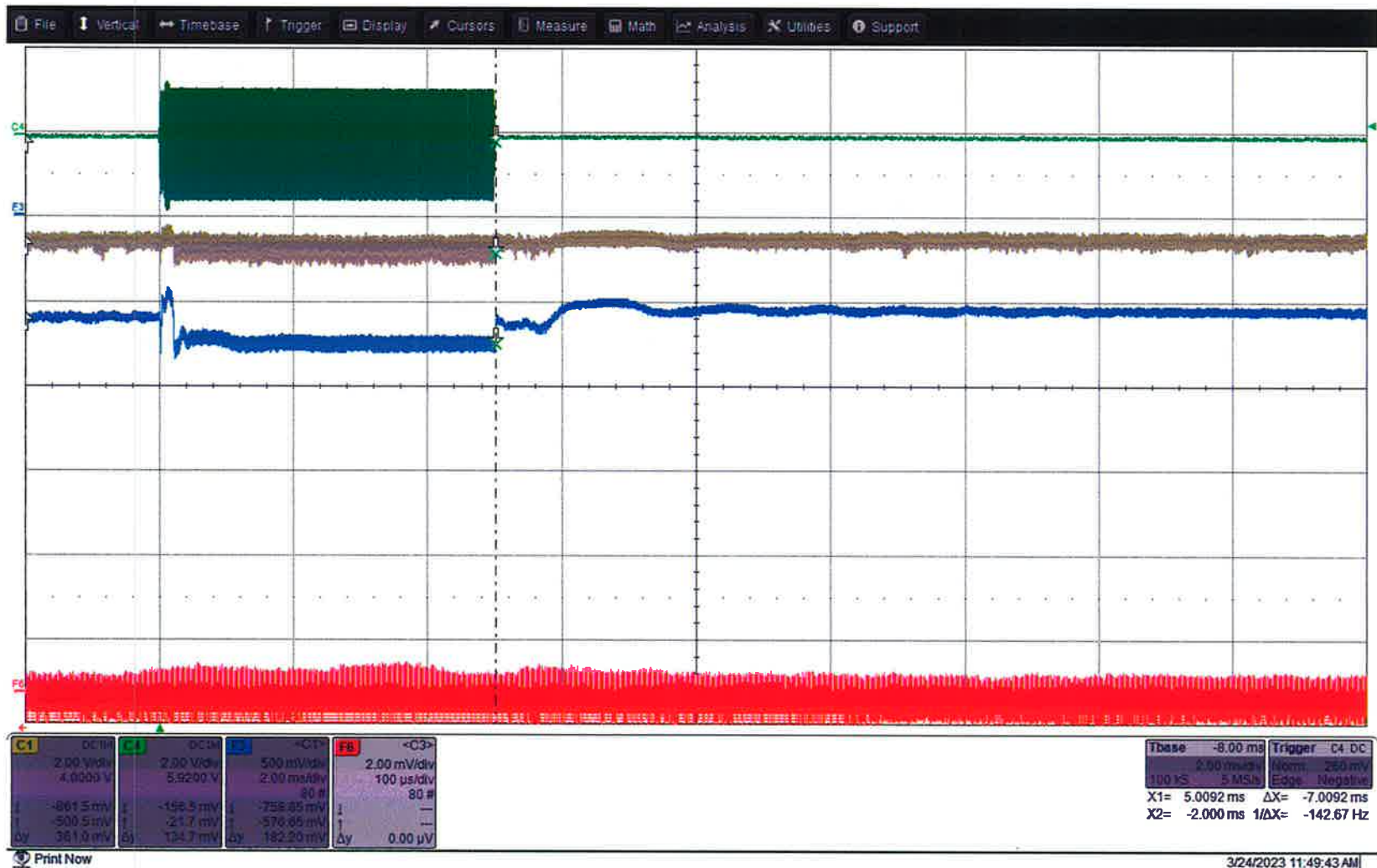


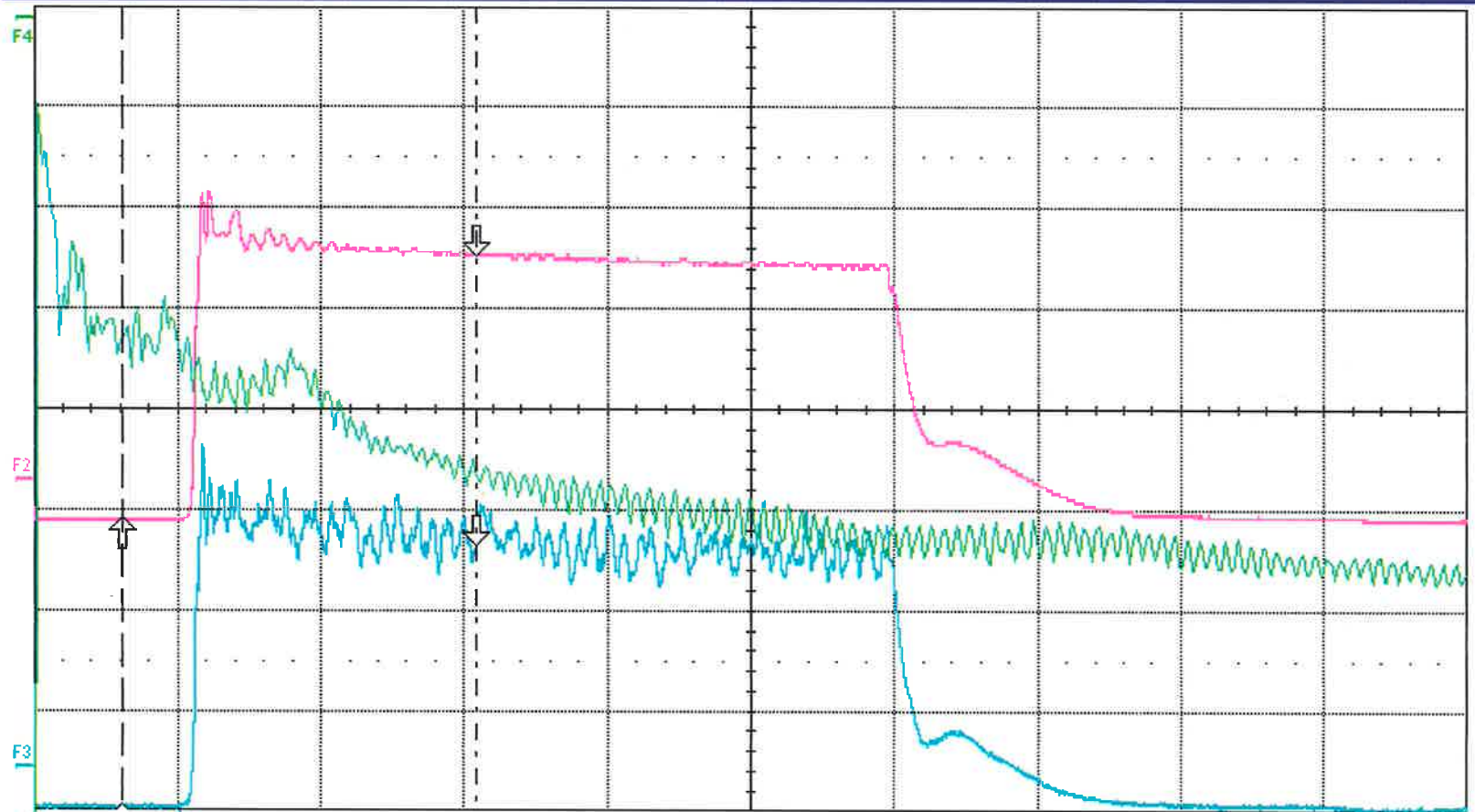
C1	C3	F2
DC1M	DC1M	<C3>
1.00 V/div	200 mV/div	194 mV/div
-1.890 V ofst	-198.0 mV	1.00 ms/div
		745 #
2.13 V	246 mV	672 mV

TELEDYNE LECROY

Timebase	-3.04 ms	Trigger	C1 DC
	1.00 ms/div	Normal	980 mV
	1.00 MS	Edge	Positive

3/24/2023 11:46:32 AM





F2	<F3>	F3 script(C3,C2)	F4 <FFT(C2)>
2.00/div	2.00/div	2.00/div	10.0 dB/div
1.00 ms/div	1.00 ms/div	1.00 ms/div	10.0 kHz/div
175 #			175 #
↓ 4.512401	↓ 4.4330	↓ 4.4330	---
↑ -776.414e-3	↑ -808.6e-3	↑ -808.6e-3	---
Δy -5.288815	Δy -5.2416	Δy -5.2416	---

Tbase	-3.98 ms	Trigger	Ext/10/DC
	1.00 ms/div	Normal	130 mV
50.0 kS	5.0 MS/s	Edge	Negative
X1=	2.0652 ms	ΔX=	-2.4644 ms
X2=	-399.2 μs	1/ΔX=	-405.78 Hz